

1           1.    A method comprising:  
2                    positioning a conductive surface of a  
3 semiconductor wafer on a conductive polishing pad; and  
4                    providing electrical contact to said surface  
5 across the pad.

1           2.    The method of claim 1 including providing a  
2 plurality of electrodes exposed through said pad.

1           3.    The method of claim 2 including applying a  
2 potential of a first polarity to said conductive surface  
3 through said pad.

1           4.    The method of claim 3 including coupling said  
2 electrodes to a potential of a second polarity opposite to  
3 the first polarity.

1           5.    The method of claim 2 including providing  
2 circularly shaped openings in said pad over said  
3 electrodes.

1           6.    The method of claim 1 including positioning said  
2 pad over a conductive platen.

1           7.    The method of claim 5 including insulating said  
2 electrode from said pad.

1           8.    The method of claim 1 including providing said  
2 pad over a conductive platen and applying potential to said  
3 film through said pad and platen.

1           9.    The method of claim 1 including providing  
2 electrical contact to said surface over the entire extent  
3 of said surface.

1           10.   The method of claim 1 including applying pressure  
2 between said surface and said pad.

1           11.   The method of claim 1 including providing an  
2 abrasive fluid between said surface and said pad.

1           12.   The method of claim 1 including counter rotating  
2 said pad and said surface.

1           13.   A polishing pad for an electrochemical polishing  
2 process comprising:

3               a conductive body and a plurality of regularly  
4 spaced openings through said body; and

5               an electrode in said openings connectable to a  
6 potential, said electrode insulated from said body.

1           14.   The pad of claim 13 wherein said openings have a  
2 circular shape.

1        15. The pad of claim 13 including an insulator  
2 between said electrode and said body.

1        16. An electrochemical polishing apparatus  
2 comprising:  
3            a platen;  
4            a pad positioned over said platen, said pad being  
5 conductive; and  
6            a plurality of electrodes formed within openings  
7 in said pad, said electrodes being electrically isolated  
8 from said pad.

1        17. The apparatus of claim 16 wherein said platen is  
2 electrically conductive.

1        18. The apparatus of claim 16 including insulators to  
2 insulate said electrode electrically from said pad.

1        19. The apparatus of claim 16 wherein said electrodes  
2 extend through said pad and said platen.